Constraints:

The children of the fo:page-sequence-master are a sequence of *sub-sequence-specifiers*. A page-sequence satisfies the constraint determined by an fo:page-sequence-master if (a) it can be partitioned into a sequence of sub-sequences of pages that map one-to-one to an initial sub-sequence of the sequence of sub-sequence-specifiers that are the children of the fo:page-sequence-master and, (b) for each sub-sequence of pages in the partition, that sub-sequence satisfies the constraints of the corresponding sub-sequence-specifier. The sequence of sub-sequences of pages can be shorter than the sequence of sub-sequence-specifiers.

It is an error if the entire sequence of sub-sequence-specifiers children is exhausted while some areas returned by an fo:flow are not placed. Implementations may recover, if possible, by re-using the sub-sequence-specifier that was last used to generate a page.

Contents:

(single-page-master-reference|repeatable-page-master-reference|repeatable-page-master-alternatives)+

The following properties apply to this formatting object:

- "master-name" — § 7.25.8 on page 304

6.4.8. fo:single-page-master-reference

Common Usage:

An fo:single-page-master-reference is the simplest sub-sequence-specifier. It specifies a sub-sequence consisting of a single instance of a single page-master. It is used to specify the use of a particular page-master at a given point in the sequence of pages that would be generated using the fo:page-sequence-master that is the parent of the fo:single-page-master-reference.

Areas:

The fo:single-page-master-reference formatting object generates no area directly. It is used by the fo:page-sequence formatting object to generate pages.

Constraints:

The fo:single-page-master-reference has a reference to the fo:simple-page-master which has the same master-name as the *master-reference* trait on the fo:single-page-master-reference.

The sub-sequence of pages mapped to this sub-sequence-specifier satisfies the constraints of this sub-sequence-specifier if (a) the sub-sequence of pages consists of a single page and (b) that page is constrained to have been generated using the fo:simple-page-master referenced by the fo:single-page-master-reference.

Contents:

EMPTY

The following properties apply to this formatting object:

- "master-reference" — § 7.25.9 on page 304

6.4.9. fo:repeatable-page-master-reference

Common Usage:

An fo:repeatable-page-master-reference is the next simplest sub-sequence-specifier. It specifies a sub-sequence consisting of repeated·instances of a single page-master. The number of repetitions may be bounded or potentially unbounded.

Areas:

The fo:repeatable-page-master-reference formatting object generates no area directly. It is used by the fo:page-sequence formatting object to generate pages.

Constraints:

The fo:repeatable-page-master-reference has a reference to the fo:simple-page-master which has the same master-name as the *master-reference* trait on the fo:repeatable-page-master-reference.

The sub-sequence of pages mapped to this sub-sequence-specifier satisfies the constraints of this sub-sequence-specifier if (a) the sub-sequence of pages consists of zero or more pages, (b) each page is generated using the fo:simple-page-master referenced by the fo:repeatable-page-master-reference, and (c) length of the sub-sequence is less than or equal to the value of *maximum-repeats*.

If no region-master child of the fo:repeatable-page-master has a region-name associated to any flow in an fo:page-sequence, then the sub-sequence is constrained to have length zero.

Contents:

EMPTY

The following properties apply to this formatting object:

- "master-reference" — § 7.25.9 on page 304
- "maximum-repeats" — § 7.25.10 on page 305

6.4.10. fo:repeatable-page-master-alternatives

Common Usage:

The fo:repeatable-page-master-alternatives formatting object is the most complex sub-sequence-specifier. It specifies a sub-sequence consisting of repeated instances of a set of alternative page-masters. The number of repetitions may be bounded or potentially unbounded. Which of the alternative page-masters is used at any point in the sequence depends on the evaluation of a condition on the use of the alternative. Typical conditions include, testing whether the page which is generated using the alternative is the first or last page in a page-sequence or is the page blank. The full set of conditions allows different page-masters to be used for the first page, for odd and even pages, for blank pages.

☞ Because the conditions are tested in order from the beginning of the sequence of children, the last alternative in the sequence usually has a condition that is always true and this alternative references the page-master that is used for all pages that do not receive some specialized layout.

Areas:

The fo:repeatable-page-master-alternatives formatting object generates no area directly. This formatting object is used by the fo:page-sequence formatting object to generate pages.

Constraints:

The children of the fo:repeatable-page-master-alternatives are fo:conditional-page-master-references. These children will be called *alternatives*.

The sub-sequence of pages mapped to this sub-sequence-specifier satisfies the constraints of this sub-sequence-specifier if (a) the sub-sequence of pages consists of zero or more pages, (b) each page is generated using the fo:simple-page-master referenced by the one of the alternatives that are the children of the fo:repeatable-page-master-alternatives, (c) the conditions on that alternative are *true*, (d) that alter-

native is the first alternative in the sequence of children for which all the conditions are *true*, and (e) the length of the sub-sequence is less than or equal to the value of *maximum-repeats*.

Contents:

```
(conditional-page-master-reference+)
```

The following properties apply to this formatting object:

- "maximum-repeats" — § 7.25.10 on page 305

6.4.11. fo:conditional-page-master-reference

Common Usage:

The fo:conditional-page-master-reference is used to identify a page-master that is to be used when the conditions on its use are satisfied. This allows different page-masters to be used, for example, for even and odd pages, for the first page in a page-sequence, or for blank pages. This usage is typical in chapters of a book or report where the first page has a different layout than the rest of the chapter and the headings and footings on even and odd pages may be different as well.

Areas:

The fo:conditional-page-master-reference formatting object generates no area directly. It is used by the fo:page-sequence formatting object to generate pages.

Constraints:

The fo:conditional-page-master-reference has a reference to the fo:simple-page-master which has the same master-name as the *master-reference* trait on the fo:conditional-page-master-reference.

There are three traits, *page-position*, *odd-or-even*, and *blank-or-not-blank* that specify the sub-conditions on the use of the referenced page-master. All three sub-conditions must be *true* for the condition on the fo:conditional-page-master-reference to be *true*. Since the properties from which these traits are derived are not inherited and the initial value of all the properties makes the corresponding sub-condition *true*, this really means that the subset of traits that are derived from properties with specified values must make the corresponding sub-condition *true*.

The sub-condition corresponding to the *page-position* trait is *true* if the page generated using the fo:conditional-page-master-reference has the specified position in the sequence of pages generated by the referencing page-sequence; namely, "first", "last", "rest" (not first nor last) or "any" (all of the previous). The *referencing page-sequence* is the fo:page-sequence that referenced the fo:page-sequence-master from which this fo:conditional-page-master-reference is a descendant.

The sub-condition corresponding to the *odd-or-even* trait is *true* if the value of the *odd-or-even* trait is "any" or if the value matches the parity of the page number of the page generated using the fo:conditional-page-master-reference.

The sub-condition corresponding to the *blank-or-not-blank* trait is *true*, if (1) the value of the trait is "not-blank" and the page generated using the fo:conditional-page-master-reference has areas generated by descendants of the fo:flow formatting object; if (2) the value of the trait is "blank" and the page generated using the fo:conditional-page-master-reference is such that there are no areas from the fo:flow to be put on that page (e.g., (a) to maintain proper page parity due to (i) a break-after or break-before value of "even-page" or "odd-page" or (ii) at the start or end of the page-sequence or (b) because the constraints on the areas generated by descendants of the fo:flow formatting object would not be satisfied if they were descendant from this page); or if (3) the value of the trait is "any".

☞ If any page-master referenced from a conditional-page-master-reference with blank-or-not-blank="*true*" provides a region in which to put fo:flow content, no content is put in that region.

Contents:

EMPTY

The following properties apply to this formatting object:

- "master-reference" — § 7.25.9 on page 304
- "page-position" — § 7.25.14 on page 308
- "odd-or-even" — § 7.25.12 on page 307
- "blank-or-not-blank" — § 7.25.1 on page 300

6.4.12. fo:simple-page-master

Common Usage:

The fo:simple-page-master is used in the generation of pages and specifies the geometry of the page. The page may be subdivided into up to five regions: region-body, region-before, region-after, region-start, and region-end.

☞ For example, if the *writing-mode* of the fo:simple-page-master is "lr-tb", then these regions correspond to the body of a document, the header, the footer, the left sidebar, and the right sidebar.

☞ The simple-page-master is intended for systems that wish to provide a simple page layout facility. Future versions of this Recommendation will support more complex page layouts constructed using the fo:page-master formatting object.

Areas:

The fo:simple-page-master formatting object generates no area directly. It is used in the generation of pages by an fo:page-sequence.

When the fo:simple-page-master is used to generate a page, a viewport/reference pair is generated, consisting of a page-viewport-area and a page-reference-area. The page-viewport-area represents the physical bounds of the output medium. The page-reference-area represents the portion of the page on which content is intended to appear; that is, the area inside the page margins.

In addition, when the fo:simple-page-master is used to generate a page, viewport/reference pairs that correspond to the regions that are the children of the fo:simple-page-master are also generated. (See the formatting object specifications for the five regions (§ 6.4.13 – fo:region-body on page 84, § 6.4.14 – fo:region-before on page 87, § 6.4.15 – fo:region-after on page 88, § 6.4.16 – fo:region-start on page 89, and § 6.4.17 – fo:region-end on page 91) for the details on the generation of these areas.)